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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,127	05/09/2001	Toru Sanefuji	208300US0	2671

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EXAMINER

AHMED, SHEEBA

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 03/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/851,127

Applicant(s)

SANEFUJI ET AL.

Examiner

Sheeba Ahmed

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 04 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-3 and 5-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-3 and 5-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Amendments to claims 1, 2, and 5 have been entered in the above-identified application. Claim 4 has been cancelled. New claims 6-19 have been added.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5, 6, 10, 12, 14, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baughman et al. (US 5,197,242) in view of Kausch et al. (US 6,113,811).

Baughman et al. disclose dual-pane thermal windows with a liquid crystal shade and having polarizer sheets therein (See Abstract and Column 11, lines 14-20). Baughman et al. do not disclose that the polarizer is a polyvinyl alcohol film having a thickness of 20 to 150 microns and having a variation in thickness in the transverse direction of 0.5 microns/mm or less. However, Kausch et al. disclose a polarizing film made of polyvinyl alcohol (***corresponding to the polyvinyl alcohol film of claims 1 or the polarization film of claim 5***) (Column 3, lines 27-28), which can be made by a variety of techniques that are capable of producing a uniform thickness (***thus indicating that the surface of the film has no variation in thickness and therefore***

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meeting the limitation that the film has a variance in thickness in the transverse direction of 0.5 microns/mm or less) of 25 to 500 microns (thus meeting the thickness limitations as recited in claims 1 and 3) (Column 4, lines 21-39). The film is then stretched to orient the film (Column 4, lines 40-50). A multiplayer optical film may be formed by laminating another layer **(corresponding to the protective film of claims 18)** with the polyvinyl alcohol film (Column 5, lines 58-65). Various other components may be added to the polyvinyl alcohol film and examples include non-ionic surfactants in amounts about 1% or less (Column 5, lines 12-22). Accordingly, it would have been obvious to one having ordinary skill in the art to replace the polarizer disclosed by Baughman et al. with the polarizing film disclosed by Kausch et al. given that the polarizing film disclosed by Kausch et al. provides improved glare reduction and increased optical contrast. With regards to the limitation that the film has a thickness of 2m or more, the Examiner takes the position that for a 2m or larger window the polarizer must inherently be 2m or larger. Furthermore, the determination of patentability for product claims containing process limitations is based on the product itself and not on the method of production. If the product is the same or obvious form a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985) and also see *MPEP 2113*. In this case, the product (i.e., the polyvinyl alcohol film) is obvious despite the process limitations of making the film by casting on a drum, by polymerizing vinyl esters and then hydrolyzing the vinyl esters, making the polyvinyl film by using a solution having a volatile component factor of 50 to 90% by weight, and discharging the

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polyvinyl alcohol film form the drum by use of a flexible lip method (**see claims 1, 6, 14, and 15**).

3. Claims 7, 8, 9, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baughman et al. (US 5,197,242) in view of Kausch et al. (US 6,113,811) and Takigawa et al. (US 3,607,812).

Baughman et al. and Kausch et al., as discussed above, do not teach that the polyvinyl alcohol of the polyvinyl alcohol film has a degree of hydrolysis of at least 90 mol%, a polymerization degree of at least 500, contains a polyhydric alcohol plasticizer and an anionic surfactant in an amount of from 0.02 to 1 part by weight based on 100 parts by weight of polyvinyl alcohol.

However, Takigawa et al. disclose polyvinyl alcohol films containing a polyvinyl alcohol resin having a polymerization degree of 700 to 1500, a hydrolysis degree of at least 97 mol%, 0.5 percent of sodium acetate (**corresponding to the anionic surfactant**) and a polyhydric plasticizer (Column 1, lines 48-55) and teach that the above described polymerization degree and degree of hydrolysis provide useful mechanical strength of the polyvinyl alcohol film and influences the water solubility (Column 2, lines 30-35 and 44-46). Furthermore, Takigawa et al. teach that the presence of the plasticizer influences the fluidity of the melt conditions (Column 2, lines 59-61). Accordingly, it would have been obvious to one having ordinary skill in the art to optimize the degree of hydrolysis and polymerization degree of the polyvinyl alcohol film taught by Kausch et al. given that Takigawa et al. teach that the mechanical strength

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and the water solubility of the polyvinyl alcohol film can be controlled by controlling the degree of hydrolysis and the polymerization degree. Furthermore, it would have been obvious to add a polyhydric alcohol plasticizer to the film taught by Kausch et al. given Takigawa et al. teach that the such a plasticizer improves melt conditions.

Response to Arguments

4. Applicant's arguments filed on December 4, 2002 (Paper No. 5) have been fully considered but they are not persuasive. Applicants traverse the rejection of claims 1-3, and 5 under 35 U.S.C. 103(a) as being unpatentable over Baughman et al. (US 5,197,242) in view of Kausch et al. (US 6,113,811) and submit that Kausch et al. do not provide any standards for the term "uniform coating" and that films with no variation in thickness are non-existent. However, the Examiner maintains that the thickness variation limitations of the claimed invention have been met. Kausch et al. specifically teach that the polyvinyl alcohol film has a uniform thickness, i.e., a thickness that does not vary and hence the limitations of independent claim 1 are met given that independent claim 1 allows for up to 0.5 microns/mm variance in thickness.

The Applicants direct the Examiners attention to Table 1 on Page 19 and state that the comparative data shows the importance of the various result-effective variable on the quality of the polyvinyl alcohol film. First, the Examiner would like to point out that independent claim 1 is not commensurate in scope with the data given in Table 1, i.e., independent claim 1 does not recite the specific composition, degree of hydrolysis or the polymerization degree of the polyvinyl alcohol. Second, the Examiner would like to

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point out that the importance of the various result-effective variable is known in the art as shown by Takigawa et al. (US 3,607,812) (See paragraph 3 above).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheeba Ahmed whose telephone number is (703)305-0594. The examiner can normally be reached on Mondays and Fridays from 8am to 6pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703)308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-5408 for regular communications and (703)305-3599 for After Final

communications.



Sheeba Ahmed
February 24, 2003



Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700